

REMARKS

Applicants respectfully request reconsideration of the pending claims of this application.

Claims 1-11, 18 and 19 are pending in this application. Claims 12-17 and 20-33 have been cancelled as a result of a previous restriction requirement. The cancellation of claims 12-17 and 20-33 is made without prejudice to the filing of continuing applications. No new matter has been added to the application as a result of the present amendment.

Turning to the Office Action, claims 1, 3-5, 7-9, and 18 stand rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent 5,149,794 ("Yatvin I"); claims 1-5, 7-9, 11, and 18-19 stand rejected under § 102(b) as being anticipated by U.S. Patent number 5,543,389 ("Yatvin II"); claims 1-5, 7-9, 11 and 18-19 stand rejected under § 102(b) as being anticipated by U.S. Patent number 5,827,819 ("Yatvin III"); claims 6 and 10 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Yatvin I; and claims 1, 3-5, 7-9 and 18, claims 1-5, 7-9, 11, and 18-19, and claims 1-5, 7-9, 11 and 18-19 stand rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over Yatvin I, Yatvin II, and Yatvin III, respectively. Each of the rejections is addressed in turn below.

Rejections Under 35 U.S.C. § 102

The Yatvin I Reference

Claims 1, 3-5, 7-9, and 18 stand rejected as being anticipated by Yatvin I. Applicants respectfully traverse this ground of rejection.

For a reference to anticipate a claim under § 102, every element of the claimed invention must be identically disclosed in a single reference. Corning Glass Works v. Sumitomo Electric, 9 U.S.P.Q.2d 1962, 1965 (Fed. Cir. 1989). The exclusion of a claimed element from a reference is enough to negate anticipation. Connell v. Sears, Roebuck & Co., 220 U.S.P.Q. 193, 1098 (Fed. Cir. 1983). Applicants respectfully submit that Yatvin I does not disclose every element of the claims, and thus does not anticipate the claimed invention.

Yatvin I teaches methods for site-specific delivery of drugs, including anti-viral and antineoplastic drugs. Yatvin I, col. 2, lines 22-25, and col. 3, lines 39-40. Site-specific delivery is achieved by conjugating the drug with a polar lipid carrier. Yatvin I, col. 2, lines

22-25. The lipid may be conjugated to the drug through a spacer, and the spacer can comprise one or a plurality of amino acids. Yatvin I, col. 2, lines 32-33.

In contrast, the claimed invention is directed, *inter alia*, to pharmaceutical compositions comprising a drug that is attached to an amino acid or amino acid derivative through a spacer. See claims 1 and 7. The amino acid or amino acid derivative is of a type that is specifically transported into a physiologically-protected site. Claims 1 and 7. In particular, the pending claims do not contain a limitation that the drug is conjugated to a polar lipid, either directly or through a spacer.

Applicants draw the distinction with the teachings of Yatvin I that the reference uses *lipids* attached to a drug for site specific drug delivery, rather than *amino acids* or amino acid derivatives (attached to a drug through a spacer) for site-specific drug delivery, as presently claimed. Further, Yatvin I does not disclose compositions having amino acids or amino acid derivatives, attached to a drug, that are specifically transported into a physiologically-protected site, as claimed. Thus Yatvin I does not disclose every element of the claimed invention. Accordingly, claims 1, 3-5, 7-9, and 18 are not anticipated by Yatvin I. Applicants thus request that the Office withdraw rejection of these claims under 35 U.S.C. § 102(b).

The Yatvin II Reference

Claims 1-5, 7-9, 11, and 18-19 stand rejected as being anticipated by Yatvin II. Applicants respectfully traverse this ground of rejection.

Yatvin II relates to methods for site-specific delivery of drugs, including antiproliferative drugs. Yatvin II, col. 2, lines 62-66 and col. 5, lines 31-32. Like Yatvin I, site-specific drug delivery in Yatvin II is achieved by conjugating the drug with a polar lipid carrier. Yatvin II, col. 2, line 66 to col. 3, line 1. As with Yatvin I, Yatvin II does not disclose pharmaceutical compositions in which an *amino acid or amino acid derivative* is attached to a drug (through a spacer), as presently claimed. Rather, Yatvin II focuses on conjugates in which drugs are attached to *lipids*. In addition, Yatvin II does not disclose compositions having amino acids or amino acid derivatives, attached to a drug, that are specifically transported into a physiologically-protected site, as claimed. Thus Yatvin II does not disclose every element of the claimed invention. Accordingly, claims 1-5, 7-9, and 18 are not

anticipated by Yatvin II, and Applicants request that the Examiner withdraw rejection of these claims under 35 U.S.C. § 102(b).

The Yatvin III Reference

Claims 1-5, 7-9, 11 and 18-19 stand rejected as being anticipated by Yatvin III. Applicants respectfully traverse this ground of rejection.

Yatvin III relates to methods for site-specific delivery of drugs, including psychotropic, neurotropic, and neurologically-acting drugs. Yatvin III, col. 4, lines 53-56. Again, as with Yatvin I and Yatvin II, site-specific drug delivery in Yatvin III is achieved by conjugating the drug with a polar *lipid* carrier. Yatvin III, col. 4, lines 57-60. Yatvin III does not disclose pharmaceutical compositions in which an *amino acid or amino acid derivative* is attached to a drug (through a spacer), as presently claimed. Further, Yatvin III does not disclose compositions having amino acids or amino acid derivatives, attached to a drug, that are specifically transported into a physiologically-protected site, as claimed. Thus Yatvin III does not disclose every element of the claimed invention. Accordingly, claims 1-5, 7-9, 11 and 18 are not anticipated by Yatvin III, and Applicants request that the Examiner withdraw rejection of these claims under 35 U.S.C. § 102(b).

Rejections Under 35 U.S.C. § 103

Claims 6 and 10 stand rejected as being unpatentable over Yatvin I, with the Office asserting that it would have been obvious to a person of ordinary skill in the art to employ the particular amino acids described in claims 6 and 10, in Yatvin I. Applicants respectfully disagree with this rejection.

An obviousness rejection under § 103 requires that the prior art "would have suggested to those of ordinary skill in the art that they should make the claimed composition or device." In re Vaeck, 947 F.2d 488, 493, 20 U.S.P.Q.2d 1438, 1442 (Fed. Cir. 1991). In addition, the prior art must reveal that "in so making or carrying out, those of ordinary skill would have a reasonable expectation of success." Id. Further, "both the suggestion and the reasonable expectation of success must be founded in the prior art, not in the Applicants' disclosure." Id.

As discussed above, Yatvin I discloses compositions and methods for site-specific drug delivery using a polar *lipid* attached to the drug. Yatvin I does not rely on *amino acids* for site-specific drug delivery. Site-specific delivery in Yatvin I is provided by polar lipids,

not amino acids. Specifically, Yatvin I does not teach or suggest replacing the polar lipid with an amino acid or amino acid derivative to provide site-specific drug delivery, nor is there motivation to make this substitution from the teachings of Yatvin I. Thus a person of ordinary skill in art would not be motivated to utilize the presently claimed amino acids in Yatvin I.

As is well-recognized in the art, amino acids and polar lipids are different chemical entities that would not be considered in the art to be readily interchangeable. Thus, a person of ordinary skill would have no reason from the teachings of Yatvin I to replace the lipids of Yatvin I with amino acids in order to provide site-specific drug delivery, and the skilled worker would have no reasonable expectation of success if making the substitution.

For at least the above reasons, claims 6 and 10 cannot be considered obvious over Yatvin I. Withdrawal of the 35 U.S.C. § 103 rejection of claims 6 and 10 is therefore respectfully requested.

Double Patenting Rejections

Claims 1, 3-5, 7-9 and 18, claims 1-5, 7-9, 11, and 18-19, and claims 1-5, 7-9, 11 and 18-19 stand rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over Yatvin I, Yatvin II, and Yatvin III, respectively.

The analysis in an obviousness-type double patenting rejection parallels the guidelines for an obviousness analysis under 35 U.S.C. § 103 discussed above. See MPEP 804.

Yatvin I, Yatvin II and Yatvin III (collectively "the Yatvin references") disclose compositions and methods for site-specific drug delivery using polar lipids attached to drugs. Site-specificity of drug delivery is taught by the Yatvin references to be provided by the polar lipids. None of the Yatvin references rely on amino acids or amino acid derivatives for site-specific drug delivery, as claimed in the pending claims of the instant application. Nor do any of the Yatvin references suggest replacing the polar lipids taught therein with amino acids or amino acid derivatives to provide site-specific delivery. Thus a person of ordinary skill in the art would have no reason, either from specific teaching or suggestion or from general motivation, to use the presently-claimed amino acids in substitution for the polar lipids taught in the Yatvin references.

In addition, as noted above, amino acids and polar lipids are different chemical entities and are not considered in the art to be readily interchangeable. Thus, a person of ordinary

skill, seeking to replace the lipids of Yatvin with amino acids in order to provide site-specific drug delivery, as instantly claimed, would have no reasonable expectation of success.

For at least the above reasons, claims 1, 3-5, 7-9 and 18, claims 1-5, 7-9, 11, and 18-19, and claims 1-5, 7-9, 11 and 18-19 cannot be considered obvious over Yatvin I, Yatvin II, or Yatvin III respectively. It follows, therefore, that the references do not support an obviousness-type double patenting rejection of the claims. Applicants thus respectfully request that the Examiner withdraw rejection of these claims on obviousness-type double patenting grounds.

CONCLUSION

Applicants respectfully request reconsideration of this application, and earnestly solicit favorable determination of patentability of all pending claims.

If the Examiner in charge of this application believes it to be helpful, Applicants invite the Examiner to contact their undersigned representative by telephone at (312) 913-0001 in order to expedite prosecution of this application.

Respectfully submitted,
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Dated: July 17, 2003

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